

A NEW GENUS OF MIRINE PLANT BUG, *CARVALHOPANTILIUS*, WITH
TWO NEW SPECIES FROM TAIWAN (HETEROPTERA, MIRIDAE)

TOMOHide YASUNAGA

Biological Laboratory, Hokkaido University of Education Ainosato 5-3-1, Sapporo 002,
Japan.

Abstract.—A new genus of the Miridae, *Carvalhopantilius*, and two new species, *C. purus* and *C. rufescens*, are described from Taiwan. The genus is characterized by the elongate body, long antenna and rather delicate hemelytra. The vertical head and laterally carinate pronotum are similar to those found in *Pantilius* Curtis, to which the new genus seems to have the closest relationship.

Key Words: Heteroptera, Miridae, new genus, new species, Taiwan

The mirid fauna of Taiwan is poorly known. Only a few authors have described new taxa and/or presented faunal lists (e.g. Poppius 1914, Esaki 1926, Miyamoto and Yasunaga 1989, 1992, Yasunaga 1994). Needless to say, the Taiwanese fauna is very rich and in great need of investigation.

Recently, through the courtesy of Mr. M. Tomokuni, of the National Science Museum, Tokyo, Japan, I had an opportunity to examine three specimens of two peculiar mirine plant bugs collected in Taiwan. These specimens were found to be two undescribed species that represent a new genus in the tribe Mirini of the subfamily Mirinae. Externally, they are similar to certain species of the genus *Pantilius* Curtis in having the vertical head and laterally carinate pronotum, or to those of *Megacoelum* Fieber in the elongate, subparallel-sided dorsal habitus. But the male genital structures and several external characters sufficiently differ from those of the latter two genera, and, therefore, I describe them as two new species in a new genus.

All measurements in the text are given in millimeters. Type specimens are all depos-

ited in the collection of Department of Zoology, National Science Museum, Tokyo, Japan.

Carvalhopantilius Yasunaga,
NEW GENUS

Body elongate, subparallel-sided, more than 8 mm in length; dorsal surface sparsely clothed with uniform pale setae. Head vertical; eyes in dorsal view rather small, removed from pronotal collar; vertex with a shallow, short, longitudinal, mesal sulcation, not carinate basally; frons projected anteriorly. Antenna long; segment I broad, provided with dark setae inwardly; segment II almost linear; segment III slightly shorter than II, longer than basal width of pronotum. Rostrum relatively long, extending beyond middle coxa.

Pronotum weakly shining, minutely, shallowly, and sparsely punctate, weakly carinate laterally, sparsely set with pale erect or suberect setae; calli undeveloped; collar shagreened, narrow, with several pale, erect setae. Scutellum rather flat, sparsely set with pale, erect setae. Hemelytra semitransparent, delicate, sparsely and minutely punc-

tate, sparsely clothed with pale, suberect setae. Legs long; tibiae with brownish spines and erect pale setae; tarsomere III longer than I or II.

Male genitalia (Fig. 2): Parameres lacking setae; left paramere semicircularly curved, triangularly projected basally (A); right paramere short and straight, terminated in small apical claw (B). Vesica bilobed, with a remarkable elongate, apical spiculum terminating in apical hook and a thin ventral sclerite; gonopore opening rather large, with U-shaped sclerite above gonoporal rim (C & D).

Type species.—*Carvalhopantilius purus* Yasunaga, new species.

Etymology.—Named after the late Dr. J. C. M. Carvalho, in combination with generic name *Pantilius* Curtis, to which this new genus seems to be related; gender masculine.

Distribution.—Central Taiwan.

Discussion.—This new genus is similar in some external characters to the Palearctic genus *Pantilius* Curtis, especially in having the vertical head and projected frons. However, the following characters differ from those of the latter: the dorsal surface uniformly clothed only with suberect setae and lacking silvery pubescence; antennal segment II almost linear and not strongly incrassate; antennal segments III and IV much longer; lateral carina of pronotum weak; hemelytra composed of rather delicate integument; vesica with a remarkable elongate spiculum but lacking a pair of rounded apical spinose sclerites, which are always found in species of *Pantilius* (see Yasunaga 1992). *Carvalhopantilius* also resembles certain species of the genus *Megacoelum* Fieber in having the elongate, subparallel-sided dorsal habitus, but the structures of head (especially, the anteriorly projected frons), pronotum (presence of lateral carination), and genitalia are different.

The new genus *Carvalhopantilius* is known by two conspicuous species endemic to the central mountain area of Taiwan.

Carvalhopantilius purus Yasunaga,
NEW SPECIES
(Figs. 1 & 2)

Description.—*Male*: Body generally whitish, large; dorsal surface sparsely clothed with suberect pale setae. Head pale brown, shining; vertex 0.41 times as wide as head, glabrous, with a short, longitudinal, mesal sulcation; margin of antennal tubercle darkened; tylus, jugum, lorum, gena, and buccula bearing silky erect hairs. Antennal segment I pale brown, with a dark brown stripe dorsally and several dark spots, bearing blackish setae; segment II pale brown, with dark narrow bands on basal $\frac{2}{5}$ and apex; segment III pale brown, somewhat tinged with red at apical half, with narrow, dark reddish brown bands on basal $\frac{2}{5}$ and apex; segment IV pale reddish brown, with pale brown base; length of segments I–IV: 1.60, 3.93, 3.70, 1.58. Rostrum pale brown, except dark apical part of segment IV, reaching hind coxae; length of segments I–IV: 0.93, 0.90, 0.73, 1.15.

Pronotum yellowish white, sparsely closed with pale, suberect, short setae, lateral carina darkened; propleuron with a dark median stripe. Mesoscutum and scutellum with a dark mesal stripe. Hemelytra yellowish white, semitransparent, with a dark mesal stripe along each inner margin of clavus; each corium with a small dark submarginal spots before midlength and one at cuneal fracture; lateral margin of embolium narrowly darkened; membrane pale brown, with 3 somber spots along posterior margin of vein. Legs pale brown; femora with small dark spots, bearing pale erect setae and some dark trichobothria; tibiae with pale erect setae and brownish spines; hind tibia with a dark spot at base and a narrow stripe from base to middle; apical parts of tarsomeres III somewhat darkened; length of hind femur, tibia and tarsus: 4.10, 6.60, 0.90; that of hind tarsomeres I–III: 0.31, 0.38, 0.44.

Abdomen pale brown; male genital seg-

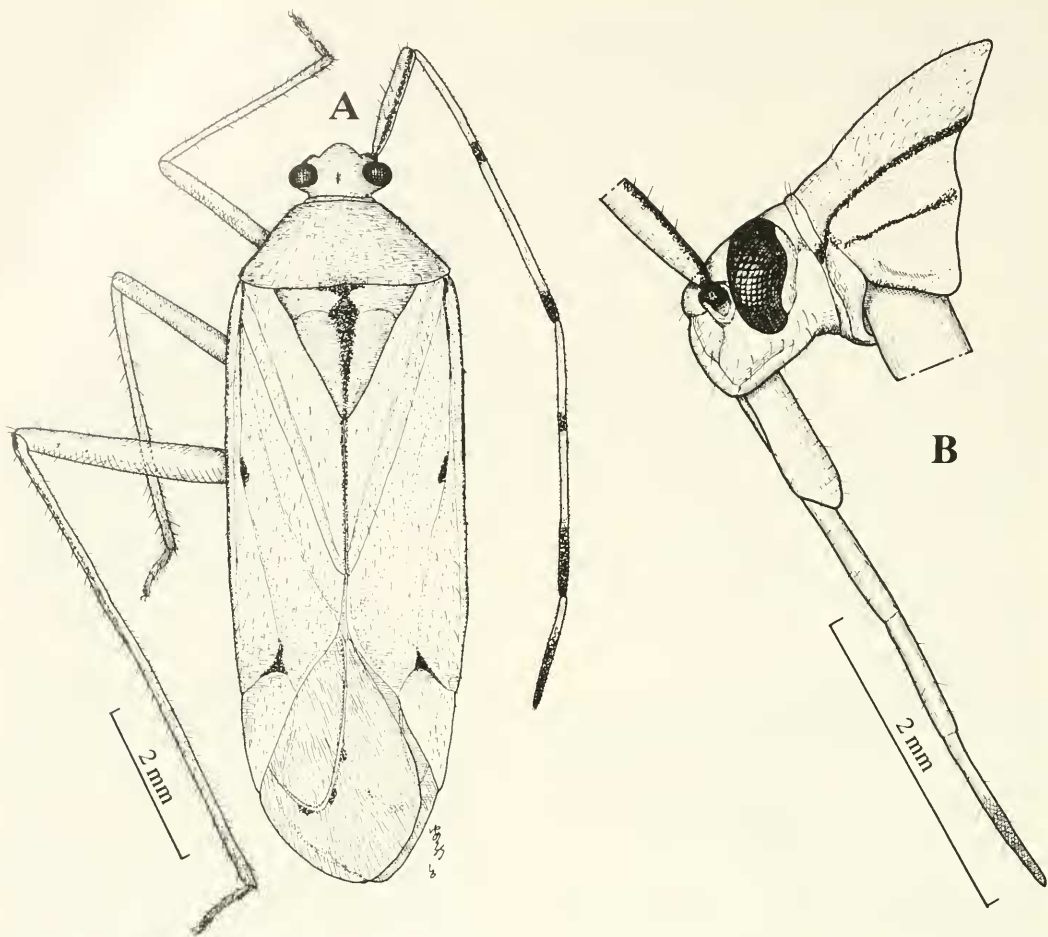


Fig. 1. *Carvalhopantilius purus*, holotype male. A, dorsal habitus. B, left lateral view of head and pronotum.

ment with a mesal keel-like process posteriorly.

Male genitalia as mentioned in generic description (Fig. 2).

Dimensions: Body length 11.10, head width 1.38, total rostral length 3.55, mesal pronotal length 1.38, basal pronotal width 2.73 and width across hemelytra 3.20.

Female: Unknown.

HOLOTYPE: ♂, Wuling-Chika Shan-chuang, 1900–2400 m alt., Mt. Hsuehsan, Hoping, Taichung Hsien, 13. Aug. 1990, M. Tomokuni.

Etymology.—From the Latin, *purus* (pure

or untainted), referring to the pure whitish general coloration.

Distribution.—Central mountain area of Taiwan.

Remarks.—This new species is easily recognized by the large, elongate, whitish body, and such whitish coloration that at first appears teneral is unusual within the Miridae. Yasunaga and Takai (1994) recently described *Eocalocoris albicerus* from Japan, which also exhibits yellowish-white general coloration. The latter species is associated with the white flowers of *Clethra barbinervis* (Clethraceae). Its cryptic whitish coloration

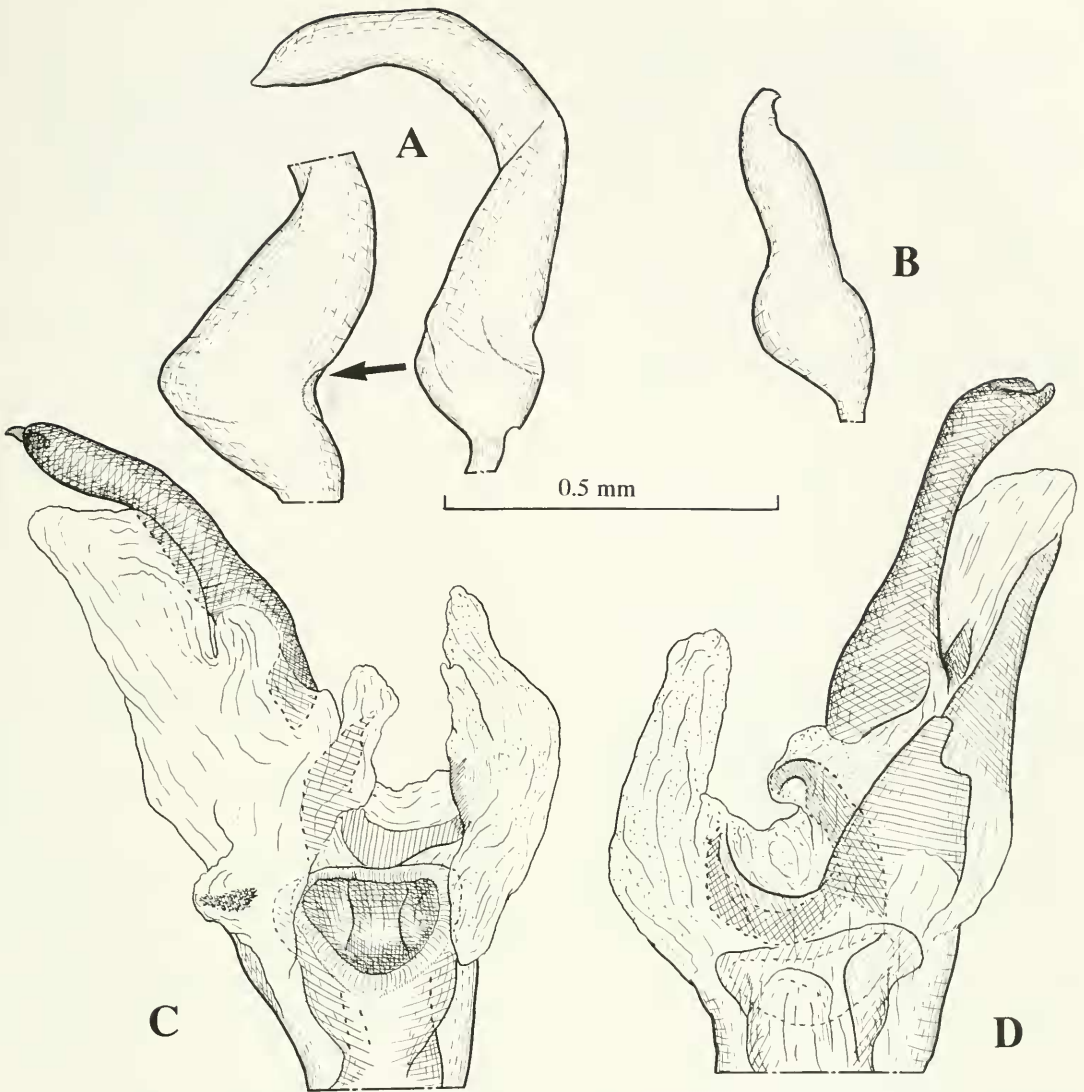


Fig. 2. Male genitalia of *Carvalhopantilius purus*, holotype. A, left paramere. B, right paramere. C, vesica in dorsal view. D, vesica in ventral view.

undoubtedly affords considerable protection against natural enemies. No other information is available on its ecology.

***Carvalhopantilius rufescens* Yasunaga,
NEW SPECIES
(Fig. 3)**

Description.—*Female*: Body generally pale reddish brown, somewhat sanguineous; setae on dorsum indistinct. Head red-

dish brown, subshining, somewhat shagreened, sparsely set with short erect hairs; vertex 0.38–0.39 times as wide as head, with a weak mesal longitudinal sulcation. Antennae almost unicolorously reddish brown; apical part of segment II and median and apical parts of III slightly darker; extreme base of segment IV yellowish; length of segments I–IV: 1.23, 3.05–3.13, 2.90–2.98, 1.33–1.45. Rostrum pale reddish brown,

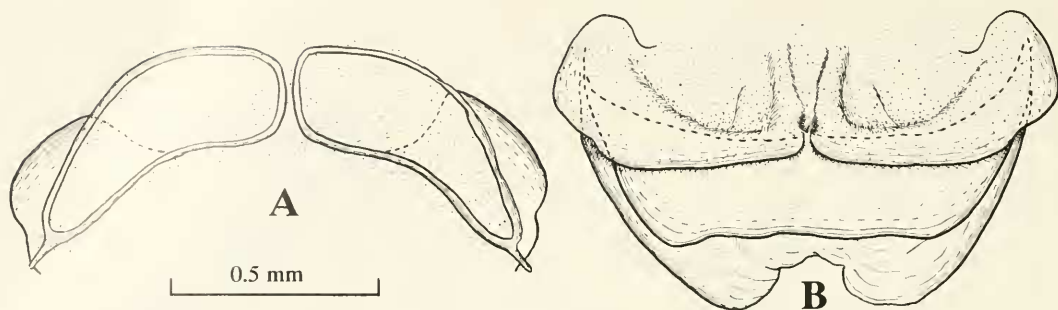


Fig. 3. Female genitalia of *Carvalhopantilius rufescens*, paratype. A, sclerotized ring in ventral view. B, posterior wall of bursa copulatrix in anterior view.

reaching middle coxa; apical half of segment IV darkened; length of segments I–IV: 0.73–0.75, 0.73–0.75, 0.50–0.55, 0.80–0.88.

Pronotum reddish brown, somewhat darkened medially and laterally, sparsely with shallow minute punctures, lateral margin weakly carinate; setae on pronotum very short and sparse; ventral margin of propleuron darkened. Mesoscutum and anterior margin of scutellum somewhat darkened medially. Hemelytra reddish brown, sparsely set with pale suberect short setae; lateral margin of corium narrowly darkened medially; apex of embolium darkened; cuneus deep red or sanguineous; membrane somber pale brown, with partly reddish veins. Legs pale reddish brown; bases of femora paler; tibiae lacking erect setae; tarsi pale brown, except apical halves of tarsomeres III dark brown; length of hind femur, tibia and tarsus: 3.18–3.33, 5.08–5.30, 0.70–0.73; that of hind tarsomeres I–III: 0.25, 0.31–0.36, 0.34–0.39.

Abdomen reddish brown, widely darkened dorsally.

Female genitalia (Fig. 3): Sclerotized ring thin-rimmed, with a lateral pointed projection, each ring contiguous to one another medially (A); posterior wall of bursa copulatrix with rather wide interramal lobes and a distinct interramal sclerite (B).

Dimensions: Body length 8.15–8.40, head width 1.28–1.30, total rostral length 2.75–2.78, mesal pronotal length 1.20–1.23, basal

pronotal width 2.33–2.48 and width across hemelytra 2.93.

Male: Unknown.

HOLOTYPE: ♀, Wuling, 1900 m alt., Hoping, Taichung Hsien, 11. Aug. 1990, M. Tomokuni. **PARATYPE**: 1 ♀, same data as for holotype.

Etymology.—From the Latin, *rufescens* (becoming red), referring to the reddish general coloration.

Distribution.—Central mountain area of Taiwan.

Remarks.—This new species resembles *C. purus*, from which it is easily distinguished by the reddish coloration of the body, the shorter and more sparse setae on dorsum, the long antennal segment IV that is longer than segment I, the shorter rostrum that is not reaching the hind coxa, and the hind tibiae lacking the erect setae, in addition to being significantly smaller in size. There is no information on its ecology.

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